

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: Pro Silicate

PRODUCT USE: Fertilizer WHMIS CLASSIFICATION: D2B (eye, skin, respiratory, and gastrointestinal tract irritant) and E

MANUFACTURER'S NAME: Grotek Manufacturing Inc.

SUPPLIER'S NAME: Grotek Manufacturing Inc.

STREET ADDRESS: #284-505 -8840 -210th Street, Langley, BC V1M 2Y2

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IN CASE OF EMERGENCY: (604) 882-7686

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS #	LD ₅₀ OF INGREDIENT (SPECIFY SPECIES & ROUTE)	LC ₅₀ OF INGREDIENT (SPECIFY SPECIES)
Potassium Silicate	15-40	1312-76-1	LD ₅₀ (oral rat) >1,000 mg/kg LD ₅₀ (dermal rabbit) >2,000 mg/kg	NAP
Water	Balance	0007732-18-5	NAP	NAP

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE: Liquid	ODOUR and APPEARANCE: Odourless. Milky or clear viscous liquid			ODOUR THRESHOLD (ppm): NAV
VAPOUR PRESSURE: (mmHg) NAP	VAPOUR DENSITY: (Air=1) NAP	EVAPORATION RATE: (Butyl Acetate = 1.0) <1	BOILING POINT: (°C) >100	FREEZING POINT: (°C) <0
pH: 11.4	SPECIFIC GRAVITY: >1	COEFF. WATER/OIL DIST. NAV		SOLUBILITY: Water based product

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY: Not flammable.

IF YES UNDER WHAT CONDITIONS?

MEANS OF EXTINCTION: For fires involving this product, water, fog, carbon dioxide, foam or dry chemical may be used.

SPECIAL PROCEDURES: Water based product. Treat surrounding fire

FLASHPOINT (°C) AND METHOD: NAP	UPPER FLAMMABLE LIMIT (%): NAP	LOWER FLAMMABLE LIMIT: (%): NAP
AUTOIGNITION TEMPERATURE (°C) NAP	HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, silicon and potassium	

EXPLOSION DATA - SENSITIVITY TO IMPACT: NAP not expected SENSITIVITY TO STATIC DISCHARGE: NAP not expected

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY: Stable under normal condition of use.

INCOMPATIBILITY: Avoid contact with strong oxidizing agents and acids.

CORROSIVE BEHAVIOUR: Yes

REACTIVITY AND UNDER WHAT CONDITIONS: Hazardous polymerization will not occur. Avoid excessive heat, sparks, open flames and sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, silicon and potassium

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY: SKIN CONTACT: Yes - SKIN ABSORPTION: No EYE CONTACT: Yes - INHALATION: Yes - INGESTION: Yes

EFFECTS OF ACUTE EXPOSURE TO PRODUCT:

Ingestion - Ingestion may result in stomach or throat burns. The absence of burns in the mouth does NOT reliably exclude burns of the throat. Patients with stridor, drooling or vomiting are more likely to have esophageal burns. In severe cases gastrointestinal bleeding or perforated viscus with dry cough can occur. Symptoms may include abdominal pain. Symptoms of ingestion of potassium may include irregular heart rate, rapid breathing, muscle weakness and in severe cases paralysis.

SECTION 6 - TOXICOLOGICAL PROPERTIES continued

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: continued

Inhalation - Aerosol and mist may be irritating or corrosive to nose, mouth and throat. Inhalation may produce upper airway edema, respiratory failure, wheezing, pulmonary edema, and pneumonitis.

Eye contact - Exposure can produce severe eye irritation and lens damage, permanent visual loss and in severe cases perforation.

Skin contact - Causes skin irritation.

EFFECTS OF CHRONIC EXPOSURE: Irritation of the skin, respiratory tract, gastrointestinal tract and eyes may be delayed and damage may occur without the sensation or onset of pain. Prolong contact or repeated contact may cause painful dermatitis.

EXPOSURE LIMITS: Manufacturer recommends <5mg/m³. No regulatory limits available.

SYNERGISTIC PRODUCTS: NAV	IRRITANCY: Yes	SENSITIZATION: NAV	CARCINOGENICITY: No
TERATOGENICITY: NAV	REPRODUCTIVE HAZARD: NAV	MUTAGENICITY: NAV	

SECTION 7 - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Hands wear: water resistant rubber (latex, butyl), or plastic gloves (PVC). Respirator wear: NIOSH approved respirator and dust cartridges to remove aerosol or mist during product application. Eye wear: goggles. Footwear wear: work boots/rubber boots. Clothing wear: long sleeve shirt and pants.

ENGINEERING CONTROLS: General mechanical ventilation is adequate, avoid splashing.

LEAK AND SPILL PROCEDURE: Wear necessary personal protective equipment during clean-up. Use boom socks to control spill and absorbant or vacuum to clean up.

WASTE DISPOSAL: Dispose in accordance with Federal, Provincial and Municipal waste regulations.

HANDLING PROCEDURES AND EQUIPMENT: Do not handle unless safety precautions have been read and understood. Avoid eye and skin contact. Avoid inhalation of mist or aerosol.

STORAGE REQUIREMENTS: Store in cool, dry and well ventilated area, keep away from heat, sparks and flames. Separate from other readily oxidizable materials, including acids, reducing agents and organics. Keep container closed.

SPECIAL SHIPPING INFORMATION: Not regulated under Canadian TDG Act Shipping Description or US DOT Classification

SECTION 8 - FIRST AID MEASURES

INHALATION: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped, assist breathing with oxygen. Obtain medical assistance immediately.

EYE CONTACT: Flush eyes thoroughly while holding both upper and lower eye lids for a minimum of 15 minutes. Obtain medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash affected area with water for a minimum of 15 minutes. Obtain medical attention if irritation or redness persists.

INGESTION: Do not attempt to give anything by mouth to unconscious victim. If victim is alert and not convulsing, rinse mouth and give water to dilute material. Do induce vomiting without physician's direction. If vomiting occurs, have victim lean forward with head down to avoid breathing in vomit, rinse mouth. Obtain medical attention immediately.

SECTION 9 - PREPARATION DATE OF MSDS

PREPARED BY: BC Research Inc Occupational Environmental Risk Management Group	BUS. NUMBER: 604-224-4331	ADDITIONAL INFORMATION: At the time of preparation, the information and data contained in this MSDS are believed to be accurate and have been compiled from sources that are believed to be reliable
DATE: October 2, 2002		